



Floods for Food

Water Spreading Weirs are turning the tide in Afar/Ethiopia

Presentation at World Water Week, Stockholm, 30/09/2018

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The Afar Region in Ethiopia

Hyperarid Climate Change
Pastoralism

Population Growth
Wealth = Animals

Growing Pressure on Natural
Resources

Invasive Species
Commercial Agriculture

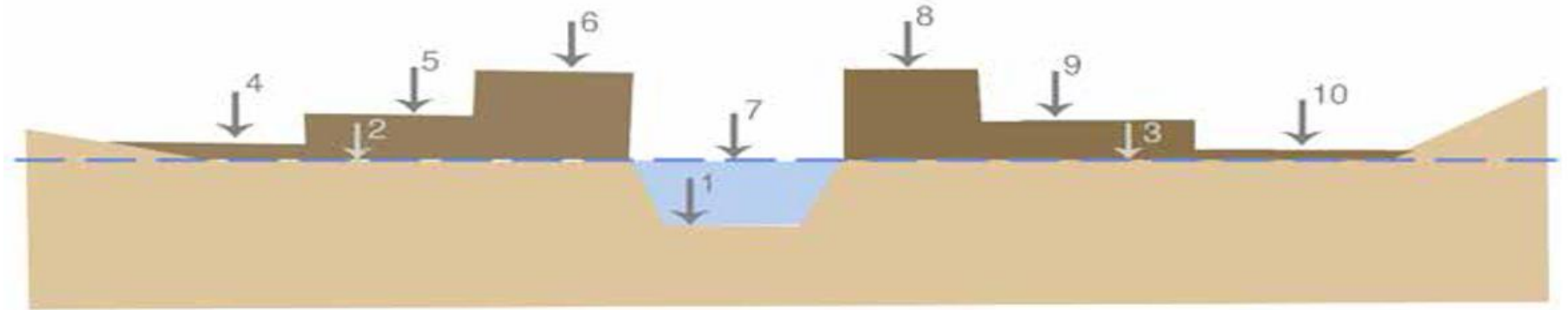


Destructive Floods



- Out of local rainfall events
- Observations:
 - Less frequent
 - More intense
 - Reduced vegetation
 - Reduced infiltration
 - Concentration of waters & erosion
 - Impacting on surrounding vegetation
 - Dry river valleys deepened
 - Infrastructure damage

Water Spreading Weirs – Design and Impact



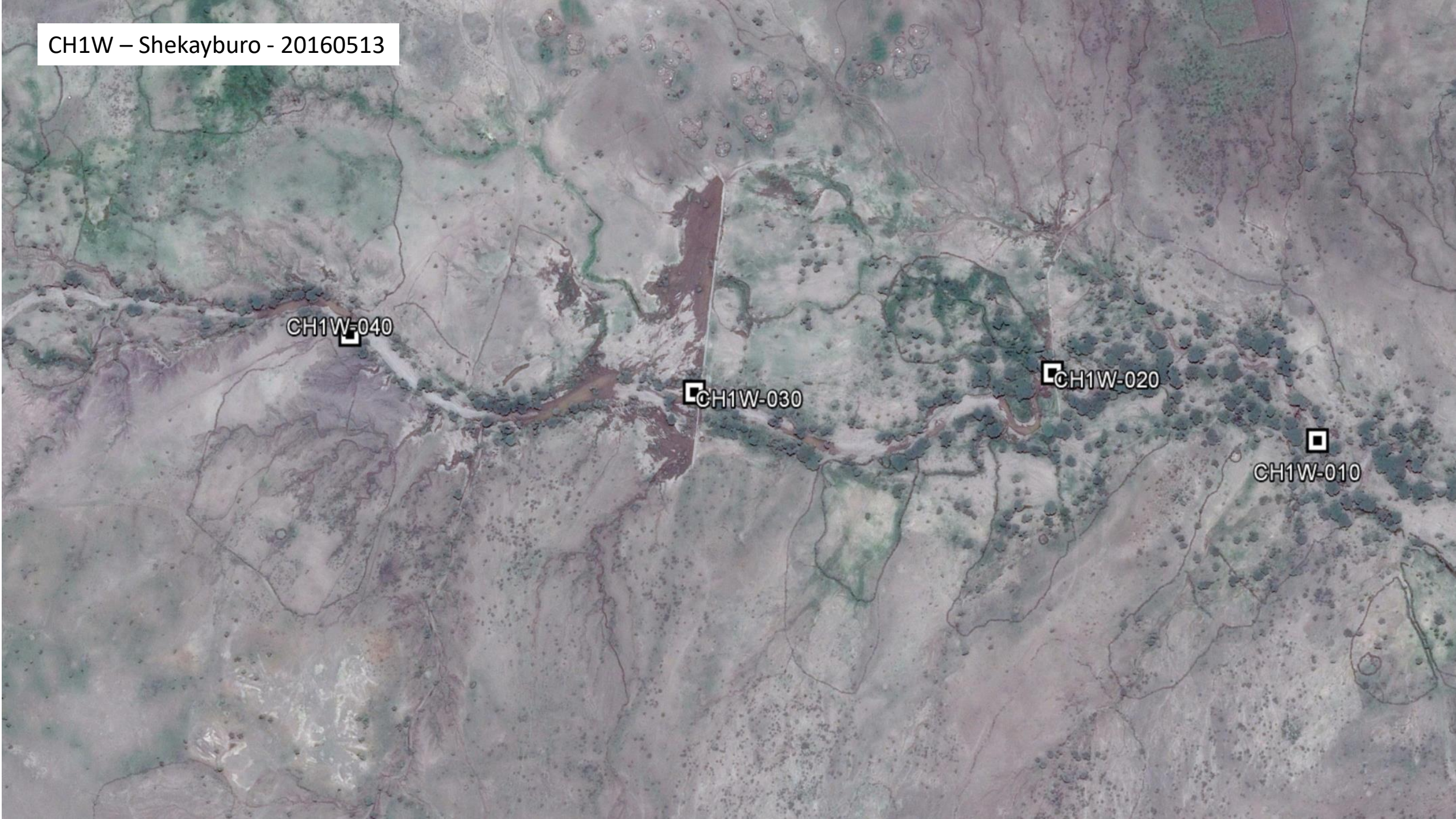
CH1W – Shekayburo - 20160513

CH1W-040

CH1W-030

CH1W-020

CH1W-010

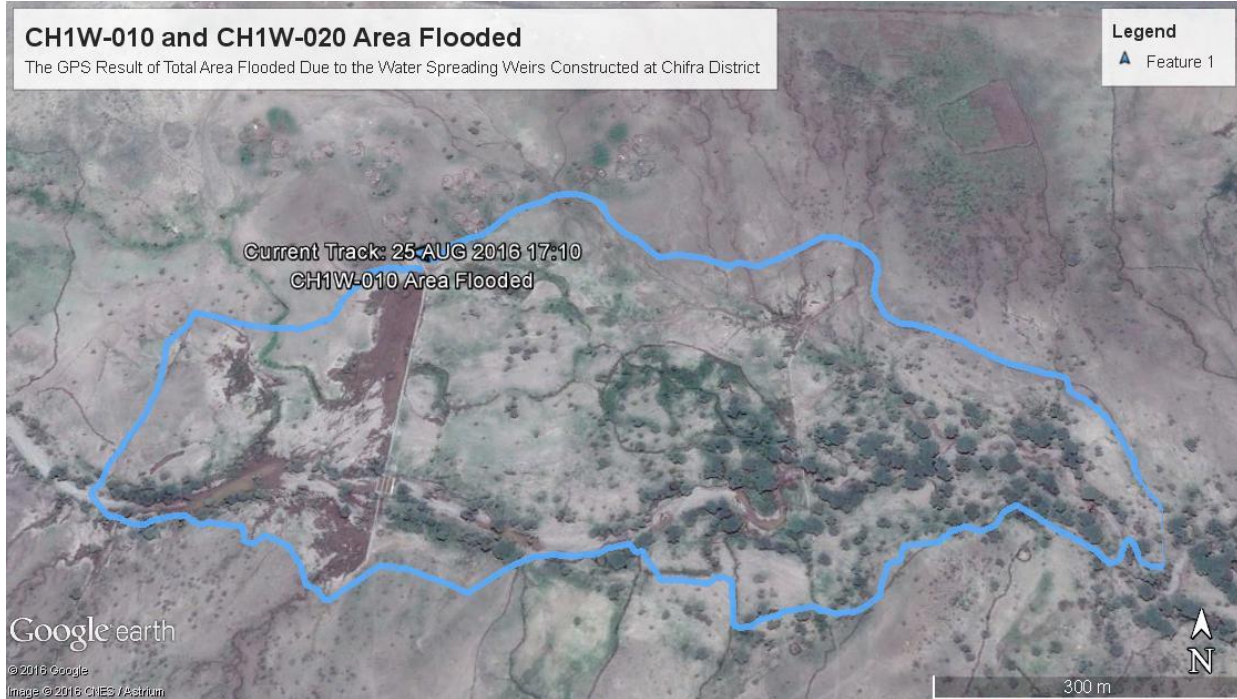


Water Spreading Weirs



CH1W-010 and CH1W-020 Area Flooded

The GPS Result of Total Area Flooded Due to the Water Spreading Weirs Constructed at Chifra District



Chifra: yields under different conditions in 2017 (kg / ha) (ICRISAT, 2017)

Crop and fodder biomass	Within WSW cascade	Rain-fed
Maize	3.630 - 5.990	710
Sorghum	6.200	300
Teff	300	334
Mung beans	1.910 grain 2.170 biomass	-
Cowpea	2.300 grain 7.000 biomass	-
Elephant grass	20.000 - 60.000	-
Pigeon pea	Biomass 7.100	-



Experiences and Outlook

- Project since 2013
 - Very positive response from political and local leaders
 - Understand pastoral context better
 - Long lasting process – years needed
- Years ahead
 - Combine WSW with biological erosion control measures
 - Landscape planning
 - Embedding the developments more into the economic context
 - Spatial planning
 - Potential 900,000 – 2,500,000 ha
 - with 250 ha/cascade = 3,600 – 10,000 cascades
 - Food/water for 3,500 people/cascade
 - = supplies for over 12m people